



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,172	03/02/2004	Chad Edward Fogg	200700807-2	3698
22879 7590 01/04/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER DO, ANH HONG	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 01/04/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No.	Applicant(s)	
	10/792,172	FOGG, CHAD EDWARD	
	Examiner	Art Unit	
	ANH H. DO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11 and 14-17 is/are rejected.
- 7) ☒ Claim(s) 3,12 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Venters et al. (U.S. Patent No. 5,805,600).

Regarding claim 1, Venters discloses:

- receiving a compressed digital signal from a modulated communication and a storage medium 61 (col. 5, lines 15-21: engine 61 comprising a bidirectional digital communication device, which contains an attendant microprocessor including associated memory/buffer storage) (Fig. 3: network interface 67);
- modifying the digital signal such that an enhancement aspect is composited within a redundant aspect of the digital signal forming an enhanced digital signal (col. 2, lines 26-34: redundant data communication port connectivity of data compression-protocol engine components that enables data transport there-through to be enhanced).

Regarding claim 2, Venters teaches forming an enhanced digital signal (col. 2, lines 26-34).

Regarding claim 4, since this is an apparatus claim corresponding to method claim 1, the discussion of claim 1 is applied hereto.

Regarding claim 5, Venters teaches reverse superresolution coding (Fig. 3: data compression protocol engine 61 for reverse superresolution coding).

Regarding claim 11, Venters discloses:

- enhancing a first image frame in an encoder (col. 2, lines 26-34: enhancing an image frame in a data compression protocol engine);
- analyzing the first image frame to determine a coding and a reconstruction of the first image frame (Fig. 3: data terminal equipment 51);
- optimizing a sequential frame based at least partly on the coding and reconstruction of the first image frame (Fig. 3: network interface 67).

3. Claims 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Draper et al. (U.S. Patent No. 6,192,365).

Regarding claim 6, Draper discloses:

- identifying a compressed image aspect in a series of compressed image representations (Fig. 4: step 106);
- determining redundant representations of the compressed image aspect within the series of compressed image representations (Fig. 4: step 100);
- modifying a redundant representation to form a modified representation such that the aspect is more completely conveyed by the series of compressed image representations (Fig. 4: step 102).

Regarding claim 7, Draper teaches comparing the modified representation with an alternatively-modified representation and causing the modified representation to be formed (col. 14, lines 64-66).

Regarding claim 8, Draper teaches forming a modified representation (Fig. 4: step 102).

Regarding claim 9, since this is an apparatus claim corresponding to method claim 6, the discussion of claim 6 is applied hereto.

Regarding claim 10, Draper teaches a detector 90 (Fig. 3) for detecting compressed image, redundant and modified representations.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 14-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 14-17 are drawn to a computer implemented process that merely manipulates data or an abstract idea, or merely solves a mathematical problem without a limitation to a practical application in the technological arts.

In order for a claimed invention to accomplish a practical application, it must produce a "useful, concrete and tangible result" *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). A practical application can be achieved through recitation of "a physical transformation outside the computer

Art Unit: 2624

for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan", or "limited to a practical application within the technological arts" (MPEP 2106 IVB2(b)).

Currently, claims 14-17 meet neither of these criteria. In order to for the claimed process to produce a "useful, concrete and tangible" result, recitation of one or more of the following elements is suggested:

- * The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106 IVB2(b)(i)).
- * A recitation of a physical transformation outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106 IVB2(b)(i)).
- * A direct recitation of a practical application in the technological arts (MPEP 2106 IVB2(b)(ii)).

Allowable Subject Matter

6. Claims 3, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 3, the prior art, taken either singly or in combination, does not teach:

Art Unit: 2624

- interpolating a first image frame prediction based on the results of the standard decoding and the up-sampling; and fusing the standard decoded frame, the interpolated standard decoded frame, and one or more previously enhanced frames.

Regarding claim 12, the prior art, taken either singly or in combination, does not teach:

- injecting... in the encoder; and describing... the encoded video signal.

Regarding claim 13, the prior art, taken either singly or in combination, does not teach:

- fusing the first frame... consistent quality.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2624

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 26, 2007.

A handwritten signature in black ink, appearing to read 'anhongdo', with a long horizontal stroke extending to the right.

ANH HONG DO
PRIMARY EXAMINER